DETAILED ACTION

Allowable Subject Matter

1. **Claims 1-5, 7-13, 15** and **20-26** (renumbered as **claims 1-20**, respectively) are allowed.

2. The following is a statement of reasons for the indication of allowable subject matter:

The present invention relates to allocation of resources among mobile stations in a wireless network.

The instant invention with respect to **claim 1**, teaches a wireless communication system in which a base station uses a radio frequency bandwidth to send voice or data traffic to active mobile stations in a coverage area served by the base station, identifying the uniquely distinct features of "*dynamically allocating the radio frequency bandwidth among a first group of active mobile stations in the coverage area according to a first bandwidth allocation algorithm; dynamically allocating the radio frequency bandwidth among a second group of active mobile stations in the coverage area according to a second bandwidth allocation algorithm; determining that the first group of active mobile stations has met a first threshold number of active mobile stations and responsively changing the first bandwidth allocation algorithm, so as to change how the radio frequency bandwidth is dynamically allocated among the first group of active mobile stations; and determining that the second group of active mobile stations has met a second threshold number of active mobile stations and responsively changing the second bandwidth allocation algorithm, so as to change how the radio frequency bandwidth is dynamically allocated among the second group of active mobile stations.*"

The closest prior art, **O'Connor, U.S. Publication Number 2004/0002339** teaches in a wireless communication system (see Fig. 1) adapted to provide communication services to

multiple mobile stations (*e.g. wireless handsets 12*) within a given coverage area (see p. 3 [0049] and Fig. 1), wherein the system dynamically allocates radio frequency bandwidth among the mobile stations according to a bandwidth allocation algorithm (see p. 2 [0021] and p. 4 [0057]), and wherein the radio frequency bandwidth is used to send voice or data traffic to the mobile stations as part of providing the communication services to the mobile stations (see p. 3 [0052] and p. 4 [0057-0058]). In addition, **Plaschke et al., U.S. Patent Number 6,023,622** teaches a multi-algorithm dynamic channel allocation mechanism consists of several channel allocation algorithms residing at the same in the MSC of a cellular network. The algorithms are selected s that each one of them provides a significant performance advantage in comparison to the others under the given traffic and interference conditions. An algorithm becomes active in the network when the actual measured traffic and interference conditions indicate that this algorithm would provide the best performance in comparison to the other algorithms implemented in the MSC (see col. 17, lines 25-35).

However, O'Connor in view of Plaschke fails to anticipate or render the above underlined limitations in combination with all the recited limitations of claim 1 obvious, over any of the prior art of record, alone or in combination.

The instant invention with respect to **claim 9**, teaches a CDMA network in which a base station uses a forward supplemental channel to send voice or data traffic to active mobile stations being served by the base station, identifying the uniquely distinct features of "*determining that a number of active mobile stations in a first group of the active mobile stations being served by the base station has met a first threshold and responsively changing a first bandwidth allocation algorithm for the first group, wherein the first bandwidth allocation algorithm is used to allocate*

the forward supplemental channel among the first group of active mobile stations; and determining that a number of active mobile stations in a second group of the active mobile stations being served by the base station has met a second threshold and responsively changing a second bandwidth allocation algorithm for the second group, wherein the second bandwidth allocation algorithm is used to allocate the forward supplemental channel among the second group of mobile active mobile stations."

The closest prior art, **O'Connor, U.S. Publication Number 2004/0002339** teaches in wireless network adapted to provide communication services concurrently to multiple stations (*e.g. wireless handsets 12*) operating within a given coverage area (see p. 3 [0049] and Fig. 1), a method comprising: determining that a threshold number of mobile stations being provided communication services are concurrently operating in a given coverage area (see p. 3 [0052]). In addition, **Plaschke et al., U.S. Patent Number 6,023,622** teaches a multi-algorithm dynamic channel allocation mechanism consists of several channel allocation algorithms residing at the same in the MSC of a cellular network. The algorithms are selected s that each one of them provides a significant performance advantage in comparison to the others under the given traffic and interference conditions. An algorithm becomes active in the network when the actual measured traffic and interference conditions indicate that this algorithm would provide the best performance in comparison to the other algorithms implemented in the MSC (see col. 17, lines 25-35).

However, O'Connor in view of Plaschke fails to anticipate or render the above underlined limitations in combination with all the recited limitations of claim 9 obvious, over any of the prior art of record, alone or in combination.

The instant invention with respect to **claim 20**, teaches a wireless communication system, identifying the uniquely distinct features of "*wherein the base station dynamically allocates bandwidth to a first group of the mobile stations according to a first bandwidth allocation algorithm and dynamically allocates bandwidth to a second group of the mobile stations according to a second bandwidth allocation algorithm; and program logic, stored in data storage and executable on a processor, (i) to determine that the first group has a first number of active mobile stations and to change the first bandwidth allocation algorithm based on the first number, so as to change how the system dynamically allocates the radio frequency bandwidth among the active mobile stations in the first group and (ii) to determine that the second group has a second number of active mobile stations and to change the second bandwidth allocation algorithm based on the second number, so as to change how the system dynamically allocates the radio frequency bandwidth among the active mobile stations in the second group*."

The closest prior art, **O'Connor, U.S. Publication Number 2004/0002339** teaches a wireless communication system (see Fig. 1) comprising: a base station (*wireless base station 10*), having an antenna arrangement for communication over an air interface with a plurality of mobile stations (*e.g. wireless handsets 12*) in a given coverage area (see p. 3 [0049] and Fig. 1), wherein the base station dynamically allocates bandwidth to the mobile stations according to a bandwidth allocation algorithm (see p. 2 [0021] and p. 4 [0057]). In addition, **Plaschke et al., U.S. Patent Number 6,023,622** teaches a multi-algorithm dynamic channel allocation mechanism consists of several channel allocation algorithms residing at the same in the MSC of a cellular network. The algorithms are selected s that each one of them provides a significant performance advantage in comparison to the others under the given traffic and interference

conditions. An algorithm becomes active in the network when the actual measured traffic and interference conditions indicate that this algorithm would provide the best performance in comparison to the other algorithms implemented in the MSC (see col. 17, lines 25-35).

However, O'Connor in view of Plaschke fails to anticipate or render the above underlined limitations in combination with all the recited limitations of claim 20 obvious, over any of the prior art of record, alone or in combination.

Claims 2-5, 7-8, 10-13, 15 and **21-26** are allowable based on their dependency on claims 1, 9 and 20 respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jacobson et al., U.S. Patent Number 6,381,250 discloses capacity allocation system using semi-autonomous network elements to implement and control a transmission schedule.

Hreha et al., U.S. Patent Number 7,219,132 discloses dynamic resource allocation architecture for differentiated services over broadband communication networks.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY S. ADDY whose telephone number is (571)272-7795. The examiner can normally be reached on Mon-Thur 8:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

//Anthony S Addy/
Examiner, Art Unit 2617